



# **South Lexington Transportation Study Lexington, Massachusetts**

**Preliminary Recommendations**

**Public Information Meeting – 11/18/14**



With RKG Associates, Inc.

Town of Lexington Engineering  
and Planning Departments



# Meeting Purpose

- Study Overview
- Preliminary Recommendations



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# Study Objectives

- Examine cumulative impacts of Hayden/Spring Developments
- Assess future traffic conditions out to a 10-year horizon from 2013 to 2023
- Identify multi-modal traffic issues/opportunities
- Review potential improvement options
- Recommend actions based on feedback, analysis findings, and evaluation of options

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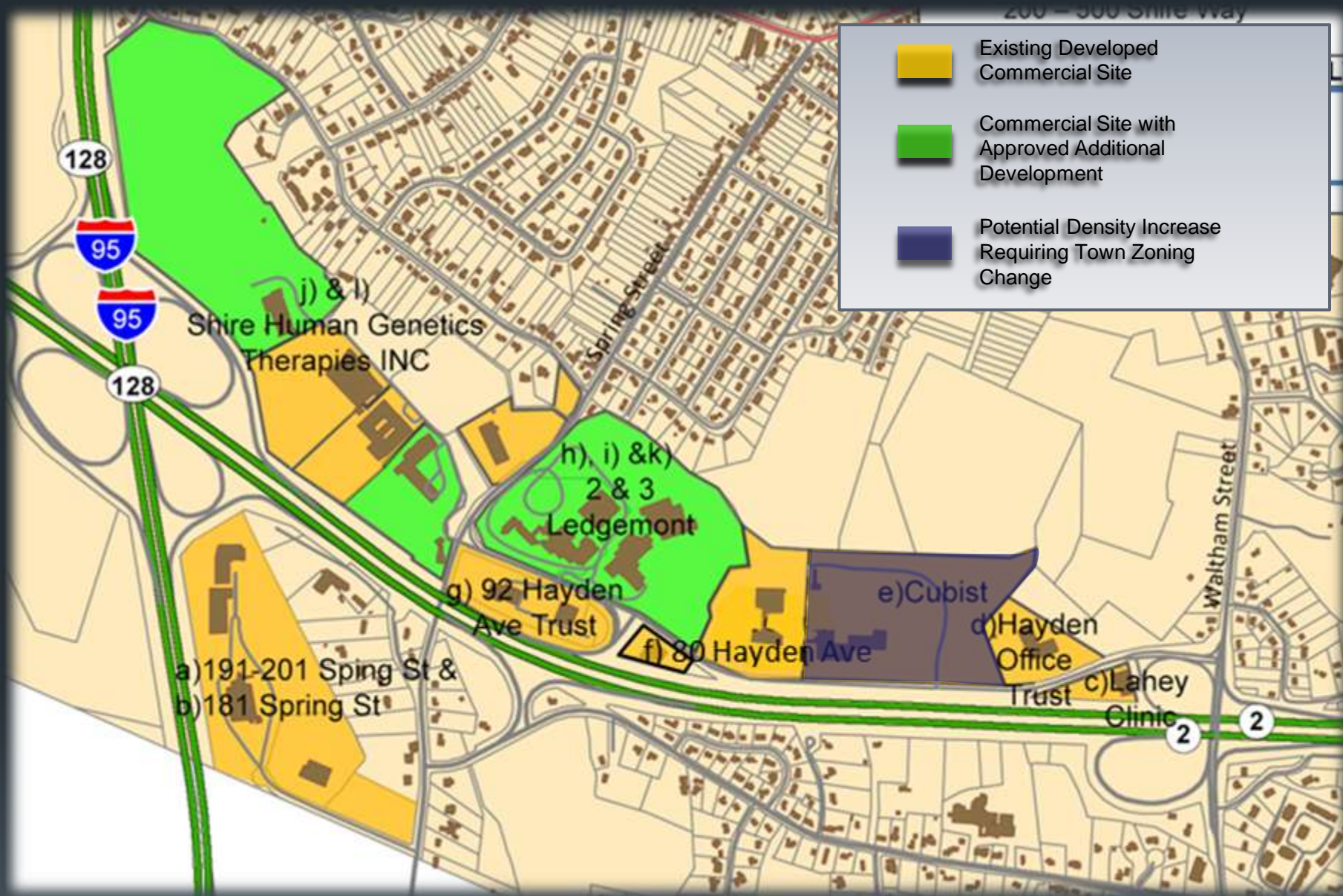
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# Hayden/Spring Developments



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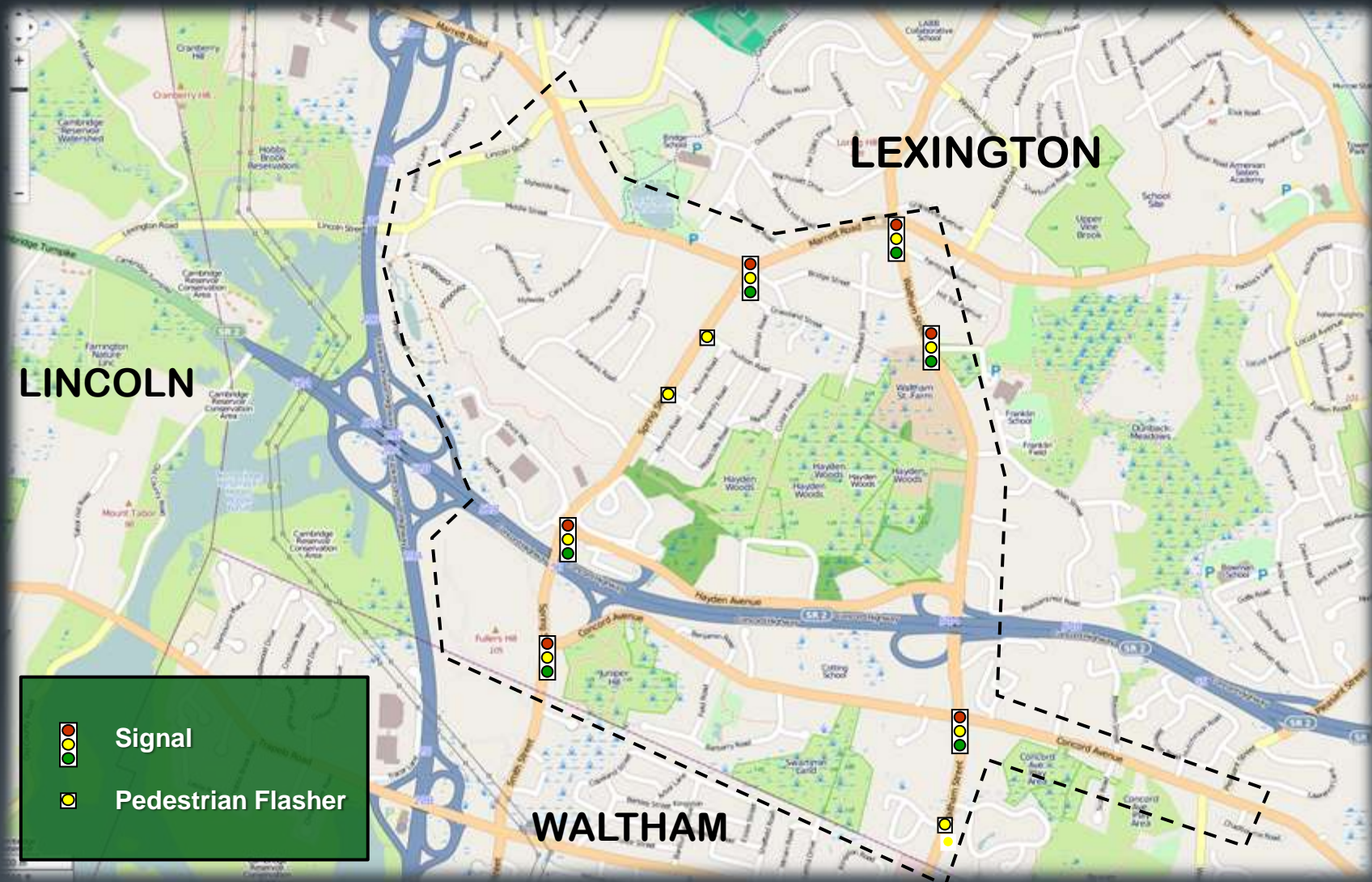
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# Study Area – Street base



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# Basis of Preliminary Recommendations

- Year 2013 counts included pedestrians, bikes, cars, trucks, buses
- Analysis of historic crash rates
- Observations & local knowledge
- Technical evaluation of options & public feedback
- Lexington Engineering and Planning Departments discussions & data



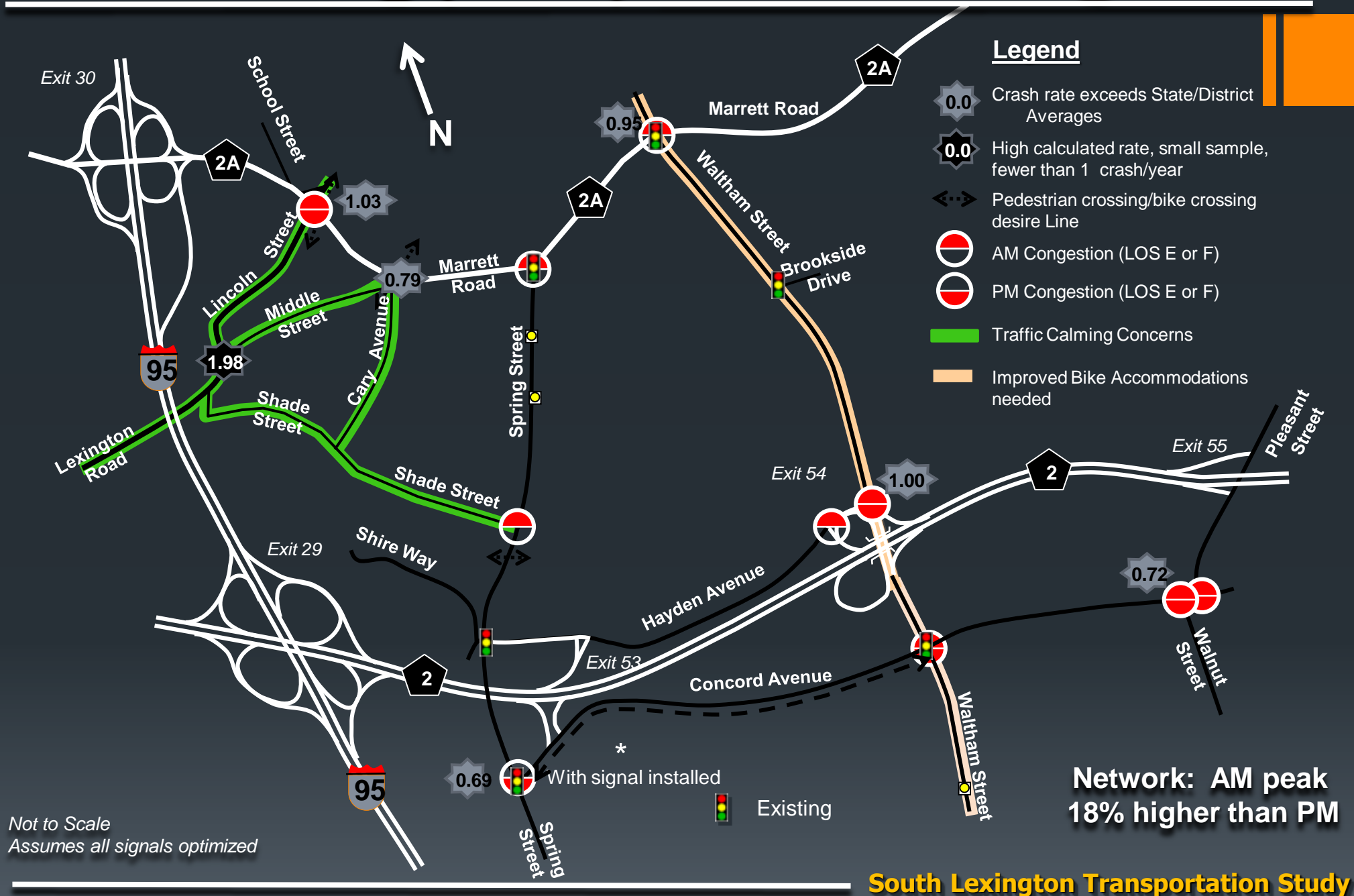
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# Existing (2013) Issues /Findings



# 2023 Projections



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# 2023 Traffic Growth Assumptions

- Background: **0.2%** annually; **2%** over next ten years – Source CTPS – not under Town's control including peak congestion related diversions between I-95/Route 2
- *Additional approved* **542** ksf office growth along Spring/Hayden corridor over the next 10 years to existing development of **2.5m** ksf
- Generated as General Office using ITE Trip Generation report (9<sup>th</sup> Edition, 2012)
- Total Projected Network Growth by 2023
  - AM Peak **12%**
  - PM peak **10 %**



# Assumed Enhancements by 2023



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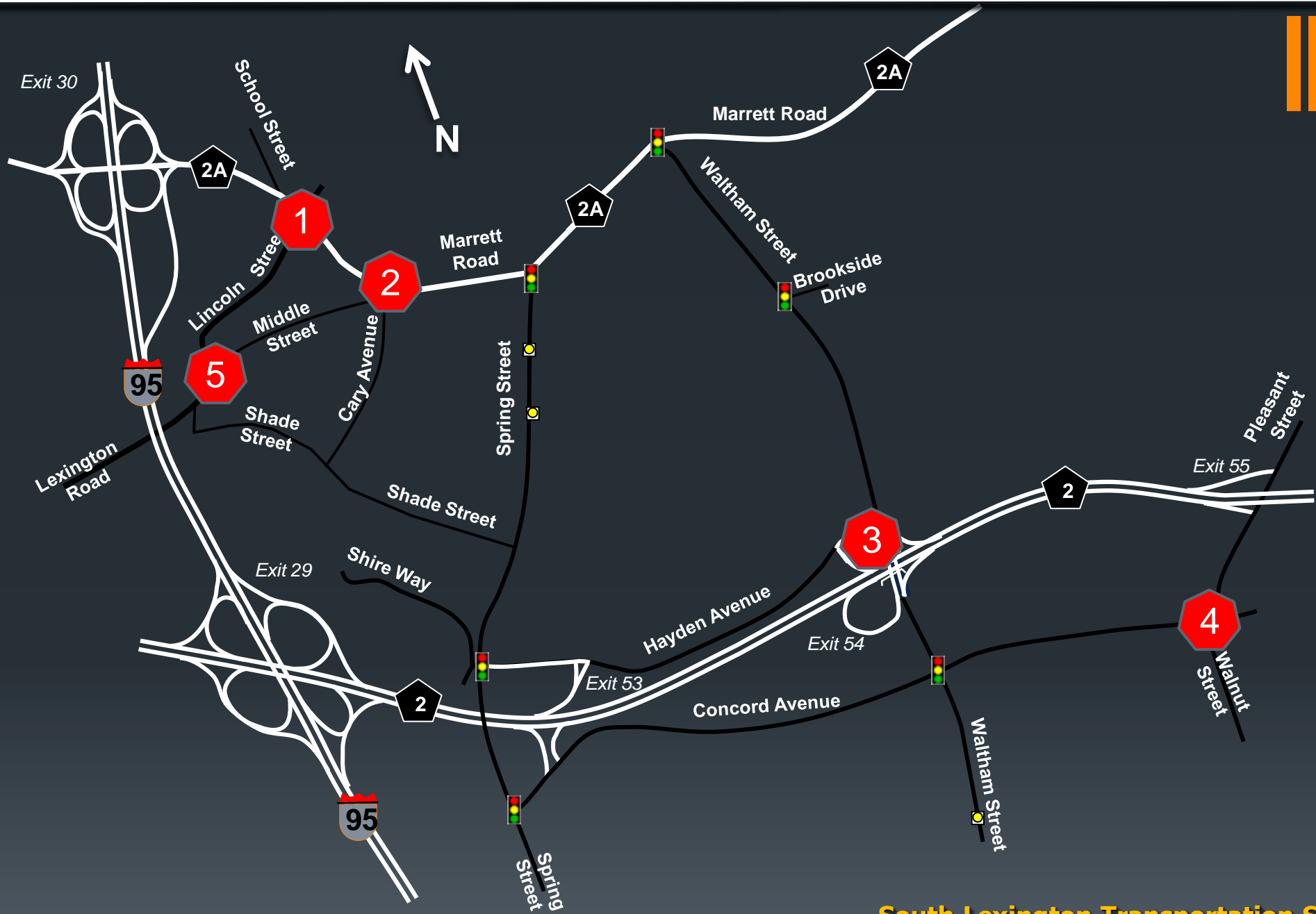


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# Focus Areas



Not to Scale



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# Preliminary Recommendation: Signalize/Add Greenspace Marrett Rd (Rte. 2A) at Lincoln St

1



	2023 No Action		2023 W/Mods	
	AM	PM	AM	PM
Unsignalized Lincoln St N at Marrett Rd*	B-14	B-12	N/A	
Unsignalized Lincoln St S at Marrett Rd*	F-120+	F-120+	N/A	
Signalized Lincoln S (Combo) at Marrett Rd	N/A		D-43	B-17

Concept not to Scale

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# Concept VISUALIZATION: South on Lincoln Street to Marrett Road (Rte. 2A)

1



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# Concept VISUALIZATION: West Across Lincoln Street to School Street at Marrett Road (Rte. 2A)

1



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# Preliminary Recommendation: 'T' Cary and Middle Streets at Marrett Road (Route 2A)



	2023 No Action		2023 W/Mods	
	AM	PM	AM	PM
Unsignalized Cary St at Marrett Rd*	D-27	C-20	N/A	
Unsignalized Middle St at Marrett Rd*	B-15	B-11	N/A	
Unsignalized Middle St at Cary Av*	A-10	A-10	N/A	
Unsignalized Rel Middle St at Cary Av*	N/A		A-9	A-9
Unsignalized Rel Middle St at Marrett Rd*	N/A		28-D	C-24

Concept: Not to Scale

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# Concept VISUALIZATION: West Across Marrett Road (Rte. 2A) at Middle Street

2



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# Concept VISUALIZATION: East Across Marrett Road (Rte. 2A) at Middle Street

2



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**Concept VISUALIZATION:  
North east Across Marrett Road (Rte. 2A)  
at Middle /Cary Streets**

2



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# Preliminary Recommendation: Signalize & Provide Geometric Bike/Ped Enhancements

3



State layout under MassDOT control. Design to MassDOT & Town of Lexington guidelines & meet “Healthy Transportation Compact” goals. Would require MassDOT approvals and Access Permits

	2023 No Action		2023 W/Mods	
	AM	PM	AM	PM
Unsignalized Rte 2 WB Off-ramp at Waltham St*	E-47	F-97	N/A	
Unsignalized Hayden Av at Waltham St*	F-120+	F-120+	N/A	
Unsignalized Rte 2 WB Off-ramp at Hayden Av*	F-82	D-29	N/A	
Signalized Rte 2 WB Off-ramp at Waltham St*	N/A		A-9	A-9
Signalized Hayden Av at Waltham St*	N/A		B-19	C-30
Signalized Rte 2 WB Off-ramp at Hayden Av*	N/A		C-24	B-10

Base Map: Town of Lexington GIS

Concept - Not to Scale

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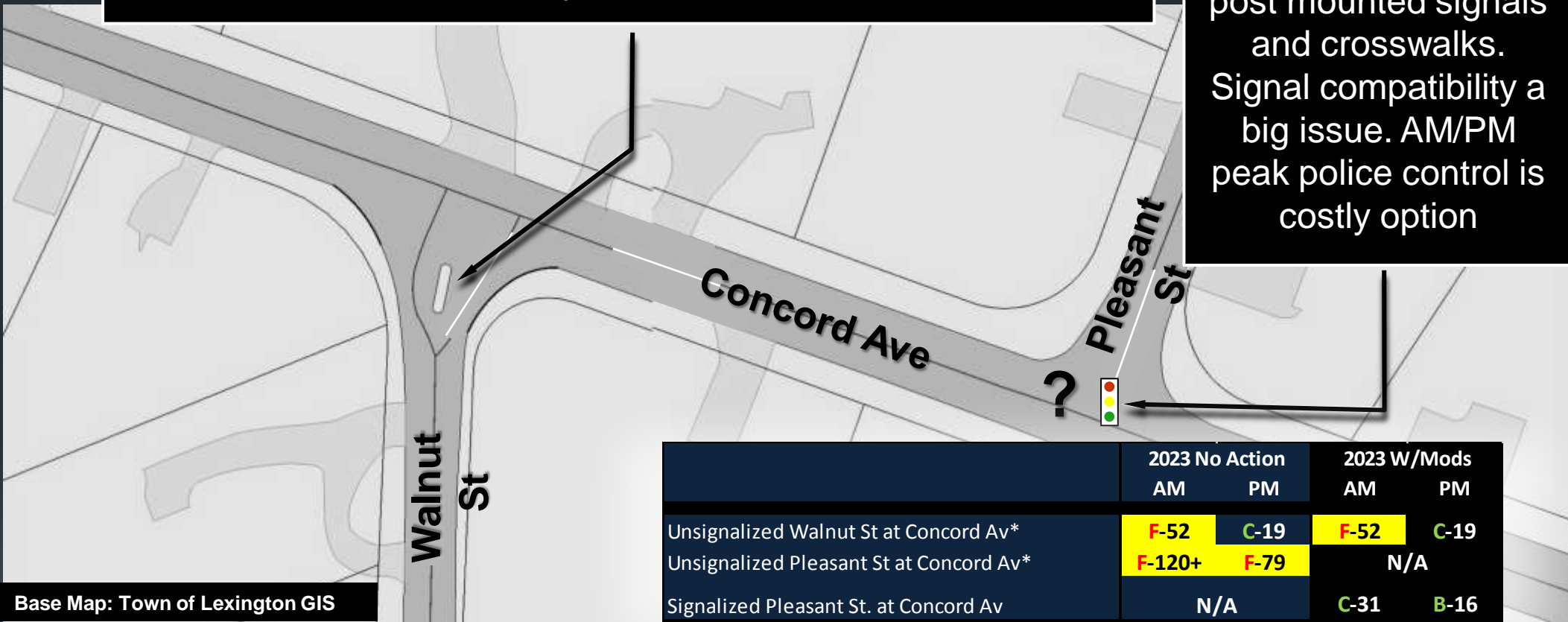


# Preliminary Recommendation: Concord Avenue at Walnut Pedestrian Mods /Pleasant Street Signalization

4

Consider higher friction pavement on downgrade only. Neighbor requested improved pedestrian accommodations to Western Greenway. To avoid tree removals, perhaps a 4' sidewalk at intersection transitioning to a 3-foot marked shoulder on the west side of roadway & 1.5' centerline relocation

Consider signalizing in future with low impact post mounted signals and crosswalks. Signal compatibility a big issue. AM/PM peak police control is costly option



Not to Scale



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## South on Concord Avenue To Walnut Street

4

Consider high friction  
pavement on  
downgrade &  
restriping

Move centerline 1.5' east  
to create west  
3' shoulder and  
9-10' travel lanes with 6"  
edge line on east side

Short raised ADA  
compliant 4'  
sidewalk transition  
to 3' shoulder

Add ADA crosswalk w/sight  
line enhancements on  
Concord Avenue *if*  
warrants met with landings  
*both sides*

Provide no  
less than 12'  
Passage

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# Preliminary Recommendation: T Lincoln into Middle Streets



Base Map: Town of Lexington GIS

	2023 No Action		2023 W/Mods	
	AM	PM	AM	PM
Unsignalized Lincoln St at Middle St*	B-13	A-9	B-13	A-9

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# Concept VISUALIZATION: Northeast on Lincoln Street to Middle Street

5



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# Other Recommended Strategies



- **Emphasize/maximize traffic demand management measures & shuttle buses for all Hayden Avenue commercial development sites to reduce traffic impacts**
- **New pedestrian or bike crossings --address ADA compliance; sight lines; use recommended FHWA guidelines for crosswalk placement**
- **Add sharrows with 11-foot travel lanes & shoulders to Waltham Street between Marrett and City of Waltham Line except at interchange where separate bike lanes are needed**
- **Optimize/regularly maintain all signals & multimodal transportation infrastructure**

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# Final Thoughts

- Town is generally doing a good job with South Lexington multi-modal infrastructure & traffic calming with streets under its jurisdiction
- Three of the five focus areas are on MassDOT layouts; require close coordination for implementation design and funding opportunities
- Lexington Town standard -- level of service D for worse constrains maximum commercial development to 'moderate' growth already approved
  - Alternatively, if the Town desires continued Hayden Avenue commercial growth, it could adopt MEPA guidelines; mitigate major impacts to no worse than No-Build





# Thank you

# Comments- Questions



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